

**Leading Change:  
Engaging with Situational Complexity**

Seth A. McCall<sup>1</sup>, Ellen Meier<sup>1</sup>, and Babette Moeller<sup>2</sup>

<sup>1</sup>Teachers College, Columbia University

<sup>2</sup>Bank Street College of Education

Paper presented at the  
Annual Meeting of the American Educational Research Association  
San Diego, California  
April 24, 2022

## Leading Change: Engaging with Situational Complexity

### Abstract

In the effort to improve student outcomes, teachers are usually the focus of professional development efforts. However, research increasingly demonstrates the significance of administrators in influencing student outcomes, raising questions about how they too should be involved in such programs. The study involved interviews conducted with 12 administrators engaged in a large-scale professional development program dedicated to equitable math instruction for diverse learners. The paper reports on the different understandings they had regarding their role in supporting the innovation, including their perspective on diverse learners, perceptions of teacher needs, and approaches for teacher support. While conventional professional development programs might overlook administrators, this paper argues for a situated approach for engaging administrators in the complex process of leading change.

## Introduction

After generations of school reform, there remains an animating desire to improve student learning. Given their proximity to students, teachers often become the focal point of these efforts. In many cases, professional development for teachers serves as a mechanism of reform. Concentrating on the approaches most likely to improve student outcomes, professional development historically focused on the teacher. However, increasingly, the research literature recognizes the role of the school leader in influencing student outcomes (Leithwood et al., 2008, 2020; Grissom et al., 2021).

This paper reports on our reflections regarding the administrator's role in a research project focused on equity in elementary math instruction. These findings come from a large-scale study of a professional development program dedicated to making math education a more equitable experience for diverse learners. The focus of the program is on meeting the needs of all students in K-5 inclusive classrooms, including students with disabilities, by providing teachers with new pedagogical approaches. Early iterations of the project focused on the teacher and the students and involved principals through a buy-in process, a fairly common approach to working with administrators. In this way, the administrator serves as the gatekeeper to clear in order to begin work with teachers. Given the growing sense of the importance of school leaders in pedagogical change initiatives, research included administrator interviews. In those interviews, administrators addressed their role as a school leader, their understanding of teacher needs, and their own particular contextual factors. As we might expect, administrators approached their work with different ideas about how they should approach it. They also had different understandings of what teachers at their school needed, often conflicting with what teachers themselves felt that they needed. The principals also talked about the particulars of their context

that they found salient and appropriate to discuss with an interviewer. This paper reports on these findings and how the researchers are beginning to think about school leaders in increasingly situated terms. This project begins to explore the role of the situation. It draws on perspectives from critical geography to investigate how principals navigate normative frameworks in place, especially as it relates to students, teachers, and their role as administrators.

Conventional professional development programs often focus on getting buy-in from the administrators. Programs that do work with principals often rely on normative frameworks of school leadership. Following these normative frameworks, professional development programs make assumptions about how the school leader *should* support their program and oversimplify the complexity of the situation. This paper argues for two primary shifts: inclusion of the building leader in professional development efforts in the school and the adoption of a situated approach to working with administrators, to engage with the complexity of their situation as building leaders.

Over the last decade, scholars complicated normative frameworks related to school leadership (e.g., transformational leadership, instructional leadership, distributive leadership, and managerialism) with nuanced composites (Printy et al., 2009), school leadership trajectories (Day et al., 2016), and context (Hallinger, 2018). In the context of competing paradigms around instructional leadership and transformational leadership, Printy et al. (2009) introduce the idea of a composite of the two, describing it as integrated leadership. Day et al. (2016) develop the idea of leadership trajectories, arguing that the principal might need to take on new roles depending on where they are on their trajectory with a school. Given these trajectories, Day et al. (2016) suggest layering leadership frameworks. Finally, Hallinger (2018) suggests that the field of educational leadership has overlooked context since the 1970s and warns that prevailing methods

obscure context. He suggests that a turn to qualitative methods and mixed methods approaches might help to foreground context, shifting attention from what principals should do to how they do it.

Normative frameworks, like school leadership frameworks, are focused on what should be done, but they are tempered by the complexity of the situation (Kruse & Johnson, 2017). Still, awareness of these competing frameworks would offer professional development programs a perspective on the complexity of the school leader's situation. Professional development programs might move beyond the normative frameworks and even the usual first step of securing buy-in from the principal to focus on difference, mindfulness of the moment (Kruse & Johnson, 2017), and the situation.

### **Theoretical framework**

In this section, we introduce the perspectives that inform our approach to situational complexity. We begin with a specific conceptualization of difference (Deleuze, 1994). Then, we turn to a recent critique of situational leadership. From there, we move into critical geography and the reconceptualization of place to rethink the idea of a situation. Rather than cut off from the outside, we find a reconceptualized situation permeated by 'best practices' and value-laden debates from the field. Finally, we consider how this differs from open systems and resonates with organizational mindfulness (Weick & Roberts, 1993; Weick & Sutcliffe, 2015) and mindfulness of the moment (Kruse & Johnson, 2017).

Schools, for all their challenges, remain a place of difference (Deleuze, 1994). Difference, in this instance, means something more than "difference from," which is difference relegated to comparison. This sort of difference prioritizes identity, sameness. In this paper, we are concerned with pure difference (Deleuze, 1994). Pure difference involves the haecceity of the

moment, the thisness of this particular event, and the felt multiplicity that exceeds identities (1994). However, in schools driven by the “quest for certainty” (Dewey, 1929), difference, that is pure difference, often becomes a problem to solve. Normative frameworks help to mediate the uncertainty of difference by developing different types of school leaders, different identities. However, these frameworks, intended to simplify the work of schools, also background difference. Rather than a problem to solve, difference is a phenomenon to live with, grapple with, and appreciate. Difference contributes to the creation of a novel situation.

Within the field of school leadership studies, the “situation” sometimes receives short shrift (Hallinger, 2018). Some read the situation as overlooking best practices developed in research literature (Day et al., 2016). In addressing situational leadership theory, Day et al. refer to a specific approach (Hersey & Blanchard, 1988). With this source in mind, the authors critique the limitations of situational leadership theory. They point to the tendency to overlook the wisdom of the field. They argue that in situational leadership theory, “there is no single ‘best’ approach to leadership because leaders who are successful respond according to their judgments of the perceived ‘maturity’ of the individual or group that they are trying to influence” (2016, p. 226). They explain that situational leadership theory fails “to acknowledge the complex range and combinations of strategies, actions, and behaviors that successful principals employ [and] ignore the active role played by values” (2016, p. 226). However, in this paper, we suggest that these arguments hinge on a particular conceptualization of the situation.

In order to better understand the situation, this paper turns to critical geography and the reconceptualization of place. For better or worse, ‘situation’ finds itself bound up with ‘place.’ In rethinking the concept of place, Lefebvre described a house and challenged prevailing assumptions about its stability. Lefebvre asks us to reconsider the house “as permeated from

every direction by streams of energy which run in and out of it by every imaginable route: water, gas, electricity, telephone lines, radio and television signals, and so on” (1991, p. 93). Lefebvre contends that the house is far from stable and constructs the house as “a complex of mobilities, a nexus of in and out conduits” (1991, p. 93). Rather than a house, Massey (1991) proposes the perspective of a satellite. Perched upon a satellite floating in space, Massey asks us to pay attention to the movement. Not just the physical movement. She asks us to imagine all the communication moving along out of sight. Finally, she asks us to consider “all the social relations, all the links between people” (Massey, 1991, p. 154). For Massey, like Lefebvre’s house, “place” is not static. Instead, it is processual. It does not necessarily have boundaries but linkages. It has no singular identity but is rife with internal conflicts. It is not solely determined by global hegemony or local forces. Its singularity comes from layers of linkages that form “the accumulated history of a place” (Massey, 1991, p. 156). Though commonly considered a container, Massey (1991) develops a conception of an extroverted place, “an ever-shifting constellation of trajectories” (Massey, 2005, p. 151). In this paper, we are concerned about how normative frameworks related to students, teachers, and administrators travel in and out of a place. It is with this sense of place that we return to the situation.

With the writing of Lefebvre and Massey in mind, we might return to the critique previously introduced, that situational leadership overlooks the best practices of the field and the importance of values. Rather than existing outside, the best practices and value-laden debates of the field permeate the school as an extroverted place. Relying on normative frameworks of school leadership backgrounds this complexity and constructs a general world. In a general world, specificity gets in the way of how things ought to be. However, as Geertz (1996) argued, we do not live in a general world. Our lives unfold in a series of specific situations.

At this point, readers familiar with the history of organizational theory might notice kinship between the extroverted place of Massey and open systems theory. The reader might even wonder if this is just rehashing older terrain. After all, open systems theory has been around since the 1960s (Scott, 1991, p. 165). Open systems models emphasize how organizations import “explanations, justifications, and meaningful accounts” from their environment. They do not just construct them on their own. However, this sort of begs the question, what is the environment? Some analysts defined it as anything that was not part of the system (1991, p. 171). Others, realizing the significance of the environment, attempted to create boundaries with sets, populations, and interorganizational fields. However, Scott summarizes the limitations with each. Sets were too hung up on focal organization (p. 171). Populations “restrict[ed] attention to competitive interdependence among similar types of organizations” (p. 171). And, interorganizational fields depended on “geographic boundaries,” “excluding nonlocal influences” (p. 171). Scott identified promising alternatives like organizational fields that involved “functional boundaries” (1991, p. 173). According to DiMaggio and Powell, the organizational field includes “the totality of relevant actors” (1991, p. 65). However, this raises questions about what qualifies as an actor, an area explored in great detail by Latour (2007). In fact, it also raises questions about the role of the researcher in the boundary work involved in constructing organizational fields (Latour, 2007). At issue is whether “the totality of relevant actors” (DiMaggio & Powell, 1991, p. 65) includes all the movement described by Massey (1991), the physical movement, the movement of communications, and the moving social relations.

The foregrounding of difference and an extroverted sense of the situation resonates with organizational mindfulness (Weick & Roberts, 1993; Weick & Sutcliffe, 2015), especially the hesitance to simplify and the attunement with the unfolding situation. Kruse and Johnson (2017)

advance this work with mindfulness of the moment, “a quality of awareness that facilitates [the leader’s] ability to hear, observe, and learn from the experiences unfolding before her’ (2017, p. 592). While Kruse and Johnson (2017) mostly address the role of the school leader, the same consideration of difference, situation, and the moment deserves attention as professional development programs consider work with administrators.

### **Methods**

The research reported here is part of a larger mixed methods study. While the larger study includes quantitative methods, including impact on teachers and student learning gains in math, this paper reports on a subset of the qualitative findings related to the building leaders. The study emerged as a way to better understand the responses of teachers who reported different levels of support from their administrators. There was a need to understand the apparent differences between principals.

The findings are based on 12 interviews with administrators engaged in the professional development program. It addresses the principals, their involvement with the PD, and their evolving understanding of the role of principal. The researcher engaged in semi-structured interviews (Bernard, 2006), providing data that addressed specific interests for the larger research team and the flexibility to probe and follow the inquiry. Although interviews are not the definitive source on what happens in schools, they have unique merit as an information source.

With transcripts uploaded to NVivo, the qualitative data analysis process involved coding, annotations, and memoing. The analysis began by modifying a previously-developed codebook based on interviews with administrators in a previous iteration of the research project. The previously-developed codebook focused on instructional leaders and building-level leaders. While the former engaged with the technical core, the latter focused on the big picture. For this

study, a review of research literature in school leadership, focusing on competing normative frameworks, helped to revise this codebook. As a result, the codebook included references to prevailing constructs like transformational leadership, instructional leadership, distributive leadership, and managerialism. However, as an inductive process, the codebook continued to develop throughout the analysis process. The coding process, in particular, included two cycles of coding, embracing Saldaña's suggestion that "[d]ata are not coded—they're *recoded*" (2016, p. 68). The first cycle of coding generated prominent codes. The second cycle of coding elaborated on these prominent codes, providing more detailed coding. Within NVivo, annotations provided an opportunity to write initial analytic notes, notes for clarification, and notes on transcription issues. Memoing also provided a space to develop codes, investigate the meaning of codes, connect pieces of the analysis, and explore nascent ideas (Bogdan & Biklen, 2007).

The larger research team developed and refined the interview protocol. With the protocol, the interviews were conducted over the phone and each lasted between 15-25 minutes. These interviews took place between August 2020 and December 2020, one of several peaks of the pandemic in the United States, which was the beginning of the second year of a two-year commitment (2019-2020 and 2020-2021). This study reports on findings from 12 interviews with administrators from 12 of the 14 cooperating schools. Administrators from two schools were unavailable for interviews. Of these 12 administrators, 11 were principals (including one interim principal) and one interviewee was an assistant principal. Audio recordings of the interviews were sent out for transcription, and transcripts were uploaded to NVivo for analysis. The analysis generated 14 memos and 45 annotations, which helped to inform the development of the codebook. Of the 51 codes, most of the excerpts clustered around the professional development initiative (i.e., its barriers, strengths, and impact), perceived teacher needs, the pandemic, the

initiative's alignment with their school, and the approaches the principals took to support the professional development program. This paper focuses on the findings around administrative support, characterizations of diverse learners, and perceptions of teacher needs as a way to better understand the complexity of the situation facing administrators.

### **Findings**

In this paper we focus on the findings as they relate to how administrators discussed students, teachers, and administrators. Given the professional development initiative's emphasis on equity in math instruction, we begin with findings related to the administrator's perspective on diverse learners. Although it is a focus of the professional development initiative, administrators varied in how they addressed diverse learners. Next, we discuss the administrators' perspective on teacher needs. A previous iteration of this project uncovered significant differences between how administrators and teachers addressed teacher needs. In this study, we find variation in how administrators address teacher needs. Finally, we highlight the role administrators play in supporting the teachers and situating the intervention in the complex, ongoing work of the school. Rather than fitting into frameworks from the literature, we find school leaders taking up aspects of different frameworks and engaging in practices that blur the boundaries between frameworks.

Administrators used a range of terms to describe students, which undoubtedly reflected, in part, their background, preoccupations, and situation. To a degree, the administrator's descriptions might also demonstrate their awareness of how facilitators of the professional development initiative talked about diverse learners. Or, it might indicate how closely their own beliefs aligned with the program's. Some administrators used language that resonated with the professional development.

And I preached that from the rooftops. I'm equity focused. So all of our conversations are about 'how are all of our children?' [...] So seeing that kind of shift some mindsets and beliefs around, it's not a one-size-fits-all model. And it's really thinking about all of our students. (Administrator 11)

The focus on equity and the rejection of “one-size-fits-all” approaches especially resonate with the professional development initiative. Other administrators seemed to use more deficit-oriented language. For example, administrators referred to “special needs students” (Administrator 4), addressed the need to “remediate our students” (Administrator 10), and referred to “what we have historically identified as your lowest performing student” (Administrator 13). These perceptions guide their pedagogical vision and their interpretations of the professional development initiative. On occasion, the equity rhetoric became tangled up with deficit language.

I'm looking at the lens of equity. I feel that is where... That's another initiative that the district has, that our school has, it's also another priority of ours. And I feel, along the lens of equity, [the professional development initiative], [is] really aligned because you're looking at the needs of the students that are *most vulnerable*. It's targeting that particular group. So I feel, there's an... The equity piece certainly aligns to that. (Administrator 8, emphasis added)

The situation for this administrator involves “another initiative that the district has.” In this case, they identify their school with an equity initiative. However, they describe equity as “another” of their priorities, implying multiple priorities. They also recognize how the professional development initiative values equity. Though they attempt to prioritize equity, Administrator 8 also became entangled with deficit language when they constructed this group as the “most vulnerable.” We might debate whether or not this passage demonstrates an equity mindset, but

what emerges are the entities intervening in the administrator's situation: the equity discourse, the district, the PD initiative, and the image of the "at-risk" student.

Compared to the politics of diverse learners, teacher needs may seem straightforward. However, our past research suggested that teachers and administrators describe teacher needs differently. When discussing teacher needs, administrators focused on "*pedagogical knowledge around, and strategies for, diverse learners*" (Yusaitis Pike & Horton, 2020, p. 11). Yet, teachers focused on "a need for structural changes—particularly, creating and protecting planning schedules and collaborative expectations—to sustain, expand and institutionalize [the professional development initiative's] practices at their schools" (Yusaitis Pike & Horton, 2020, p. 5). Given the difference between administrators and teachers, the findings from these interviews with administrators in 2017 helped to justify a more active role for administrators in the professional development initiative. Perceptions of teacher needs remained a focus for this study. When interviewed in 2020, 10 of the 12 administrators addressed teacher needs. In these 10 administrator interviews, they referred to teacher needs 41 times. They discussed teacher needs in depth, focusing on the teachers' need for professional development (n=4), need for support with remote learning (n=4), and needs that aligned with the professional development initiative (n=6). While there were main topics addressed, there was also variation in how the administrators thought about teacher needs. For example, one administrator used data to explain to teachers that they need to change their practice, "I tell you the horse you're riding died. Get off. Get Off. You can't just keep beating him. Get off the dead horse, get on a new horse and let's go." (Administrator 12). Another school leader focused on the teachers' need for coherence. "And when teachers are in their [this particular professional development initiative] training or they're in any other training, they're like, "Oh, okay." Trying to connect with the big umbrella of

[larger focus].” Other school leaders addressed needs related to the pandemic, a pressing situation for schools. This is evident in the emphasis on support with remote learning. While the previous iteration of the project found differences between administrators and teachers, these interviews uncovered different ways of thinking about teacher needs with some similarities around use of data and the pandemic.

We might trace the influences on the situation by attending to the ways the administrators describe their work, in this case, their support for the PD initiative. Most of the interviewed administrators engaged in some form of managerialism, whether it involved scheduling (n=10), hiring substitutes (n=5), or obtaining materials and resources (n=2). Most also engaged in leadership practices, like delegating authority (n=10), supporting collaborative planning (n=10), and listening to their teachers (n=7). When it came to instructional leadership, administrators mentioned their data-based decision-making (n=9), their involvement in PD (n=9), their lesson plan feedback (n=7), their formal curriculum (n=6), and their implementation support for this particular PD initiative (n=5). Finally, turning to transformational leadership, administrators addressed their own pedagogical vision (n=10), their commitment to developing people (n=8), and advocating for the PD initiative (n=7). While administrators, if asked directly, might identify with a particular framework, within the unfolding situation in their schools, these normative frameworks overlap, mix together, and contribute to complexity. One administrator addressed the struggle to create coherence out of their situation. “So there are all these different islands and my goal is to bring them all together to create a continent. And that's definitely the challenge.” (Administrator 6). In a sense, these normative frameworks are also different islands that school leaders forge into a continent. School leaders temper these normative frameworks based on their situation and the moment (Kruse & Johnson, 2017).

## Discussion

The findings addressed notable topics arising from interviews with school leaders. We focused on topics related to students, teachers, and the administrators themselves. In this section, we unpack these findings to consider how the theoretical framework might help us understand the findings at a different level.

First, when it came to perspectives on diverse learners, the findings focused on the nomenclature used by one of the administrators. While discussing their equity mindset, they referred to their “most vulnerable” students. The professional development involves identifying a “focal student” to plan adaptations to reach all students. The “diverse learner” term actually comes from the school district. Second, the administrators frequently addressed teacher needs. In fact, out of 10 interviews that addressed teacher needs, the topic came up 41 times. While a previous iteration of the research focused on the difference between how teachers and administrators discuss teacher needs, in this study the administrators discussed teacher needs differently. Administrators focused on the need for professional development, needs arising from the pandemic, or specific aspects of the professional development program. Third, administrators did not fit into normative frameworks. The ways that they described supporting the professional development program could not be easily categorized. In this paper, we suggest that these differences come from the complexity of school leaders’ situations.

In turning to the normative frameworks, the research project hoped to better understand what type of administrator offered the best partner for the professional development program. However, the administrators did not fit easily into the normative frameworks. They described practices that came from different frameworks. Then, there were also important tasks like scheduling that seemed to blur the lines between the normative frameworks. Scheduling would

seem to be important for an instructional leader and a manager. In fact, the normative frameworks might get in the way. Going back to Deleuze's (1994) "difference from" and "pure difference," these normative frameworks might be best understood as attempts to use "difference from" to clean up the "pure difference" of the school leadership situation. Relying on normative frameworks mediates the experience of "pure difference." Still, it would be a mistake to turn away from these frameworks because they contribute to the situation. Like the electricity pulsing through Lefebvre's (1991) house or the unseen communications crisscrossing the globe imagined from Massey's (1991) perch atop a satellite, these normative frameworks flicker through the situation. They form an important layer of the social relations that make up the situation.

### **Conclusion**

Professional development in education generally focuses on teachers, with the assumption that changing teacher beliefs and practices will result in improved student outcomes. With emerging evidence that administrators also play a significant role in student achievement (Leithwood et al., 2008, 2020; Grissom et al., 2021), it makes sense to engage building leaders more deeply in school improvement projects. Beyond simply asking for buy-in from the principal, school improvement programs should consider the role and responsibility of the principal in the pedagogical change initiative.

Central to all this research is the acknowledgment that while school leaders make modest direct contributions to teachers' instructional capacities (Leithwood, et al., 2006), they are essential to the development of supportive working conditions, motivation and commitment to change and the focus and pace of reform efforts. (Kruse, 2020, p. 50)

The professional development program that we are reporting on in this paper did just that.

Program staff utilized various strategies to engage school leaders in the implementation of the professional development. The strategies included engaging school leaders, their school leadership teams, and teaching staff from the targeted grade bands, in learning about and making a decision about participation in the program. School leaders also participated in leadership sessions that were offered as part of two summer institutes, and in a portion of the professional development sessions with teachers. In addition, program staff, local facilitators of the professional development, and school leaders met regularly throughout the school year to reflect on the implementation and teacher progress, to fine-tune professional development sessions to meet the needs of the school community, and to make plans for sustainability and scale up of the program. Responsiveness to the school context was amplified by the program's focus on building organizational capacity by providing professional development to local staff developers (i.e., school or district-based staff developers or teacher leaders) to become facilitators of the program. The local staff developers led the implementation of professional development and coordinated efforts with the leaders of the schools they were working with. This study suggests that administrators bring different perspectives to thinking about diverse learners, understanding teacher needs, and employing various strategies to support professional development initiatives. With the complexity of the situation facing administrators in any given school, this study also showed the promise of adopting a situated approach to school leader engagement that embraces difference and mindfulness of the moment.

**Disclaimer:**

The contents of this conference paper were developed under grant # U411B180037 from the Department of Education. However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

### References

- Barringer, M.-D., Pohlman, C., & Robinson, M. (2010). *Schools for all kinds of minds: Boosting student success by embracing learning variation*. Jossey-Bass.
- Bernard, H. R. (2006). *Research methods in anthropology: Qualitative and quantitative approaches* (4th ed). AltaMira Press.
- Bogdan, R., & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theories and methods* (5th ed). Pearson A & B.
- Day, C., Gu, Q., & Sammons, P. (2016). The impact of leadership on student outcomes: How successful school leaders use transformational and instructional strategies to make a difference. *Educational Administration Quarterly*, 52(2), 221–258.
- Deleuze, G. (1994). *Difference and repetition*. Columbia University Press.
- Dewey, J. (1929). *The Quest For Certainty*. Minton Balch And Company.
- Geertz, C. (1996). Afterward. In S. Feld & K. H. Basso (Eds.), *Senses of place*. School of American Research Press.
- Grissom, J. A., Egalite, A. J., & Lindsay, C. A. (2021). *How Principals Affect Students and Schools*.
- Hallinger, P. (2018). Bringing context out of the shadows of leadership. *Educational Management Administration & Leadership*, 46(1), 5–24.
- Hanson, M. (2001). Institutional theory and educational change. *Educational Administration Quarterly*, 37(5), 637–661.
- Honig, M. I., & Hatch, T. C. (2004). Crafting coherence: How schools strategically manage multiple, external demands. *Educational Researcher*, 33(8), 16–30.
- Kruse, S. D., & Johnson, B. L. (2017). Tempering the normative demands of professional

- learning communities with the organizational realities of life in schools: Exploring the cognitive dilemmas faced by educational leaders. *Educational Management Administration & Leadership*, 45(4), 588–604.
- Kruse, S.D. (2020). Hiding in plain sight: Systems thinking and school organization. *Journal of Educational Administration*, (59)(1), 53-58.
- Leithwood, K., Harris, A., & Hopkins, D. (2008). Seven strong claims about successful school leadership. *School Leadership and Management*, 28(1), 27–42.
- Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, 40(1), 5–22.
- Massey, D. (1991). The political place of locality studies. *Environment and Planning A*, 23(2), 267–281.
- Massey, D. B. (2005). *For space*. SAGE.
- Pohlman, C. (2008). *Revealing minds: Assessing to understand and support struggling learners*. Jossey-Bass.
- Printy, S. M., Marks, H. M., & Bowers, A. J. (2009). Integrated leadership: How principals and teachers share transformational and instructional influence. *Journal of School Leadership*, 19(5), 504–532.
- Saldaña, J. (2016). *The coding manual for qualitative researchers* (3E [Third edition]). SAGE.
- Weick, K. E., & Roberts, K. H. (1993). Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, 357–381.
- Weick, K. E., & Sutcliffe, K. M. (2015). *Managing the unexpected: Sustained performance in a complex world*. John Wiley & Sons.
- Yusaitis Pike, J. & Horton, D. (2020). Math for All Qualitative Study: Final Interview Report.

Zucker, L. G. (1991). Postscript: Microfoundations of institutional thought. In P. DiMaggio & W. Powell (Eds.), *The new institutionalism in organizational analysis* (pp. 103–107). University of Chicago Press.